





SOMMAIRE

- Globe France
- On going Projects
- The future





GLOBE France and CNES

CNES signed in october 2004 a memorandum of understanding with NASA for a pilot project ...

... which is focusing on atmosphere theme of the GLOBE program, using data from satellite missions (CALIPSO...).









- 5 workshops: 3 in collaboration with US CALIPSO outreach and for the last one the participation of a Switzerland trainer; 100 teachers trained (basic atmospheric and advanced protocols: ozone and aerosols) and 40 registered.
- 30 certificated schools and among them 24 active with 14 schools which have reported data.
- 3 videoconferences between french and american schools.
- Participation at the forum for Calipso launch.
- Participation of 4 french teachers at CCAG workshop in USA.





GLOBE measurements

We don't have yet a large number of reporting schools in France:

- lack of awareness about data by some teachers...
- difficulties for young students to enter data on the GLOBE website and time consuming for all.
- measurements are full of contraints and after a while, the students stop doing them on a permanent basis
- so measurement campaigns are organised Voyageurs des Sciences…)





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CALISPH'Air project

Built on the atmosphere theme of the GLOBE educational programme and on the Calipso and Parasol missions.



CALISPH'Air = GLOBE + CALIPSO

- Observations and measurements
- Data processing
- Communication







Web site





d'étude de l'atmosphère.

Rechercher

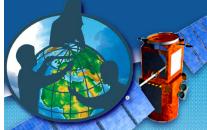
• Calipso et Parasol percent les secrets des nuages

Alors que les effets des gaz à effet de serre commencent à être mieux cernés, le rôle des aérosols, fines particules en suspension dans l'air, ainsi que celui des nuages de haute altitude restent des sources d'incertitude fortes dans la prévision du climat. Calipso et Parasol font partie de l'A-Train, un "train" spatial de six satellites, premier observatoire mondial de l'atmosphère.



Calipso (Vue d'artiste) @ Cnes/III.P.Ca







Aerosols measurements

- locally:by GLOBE students
- globally:by satellites (CALIPSO...)
- + aditional atmosphere measurements (temperature, pressure...) and observations (clouds)
- * and data cross comparison







GLOBE sun photometer project

France, US, Thailand.. cooperation

- french photometers
 - integrate AOT calculation (high schools..)
 - not yet recognized by GLOBE web site







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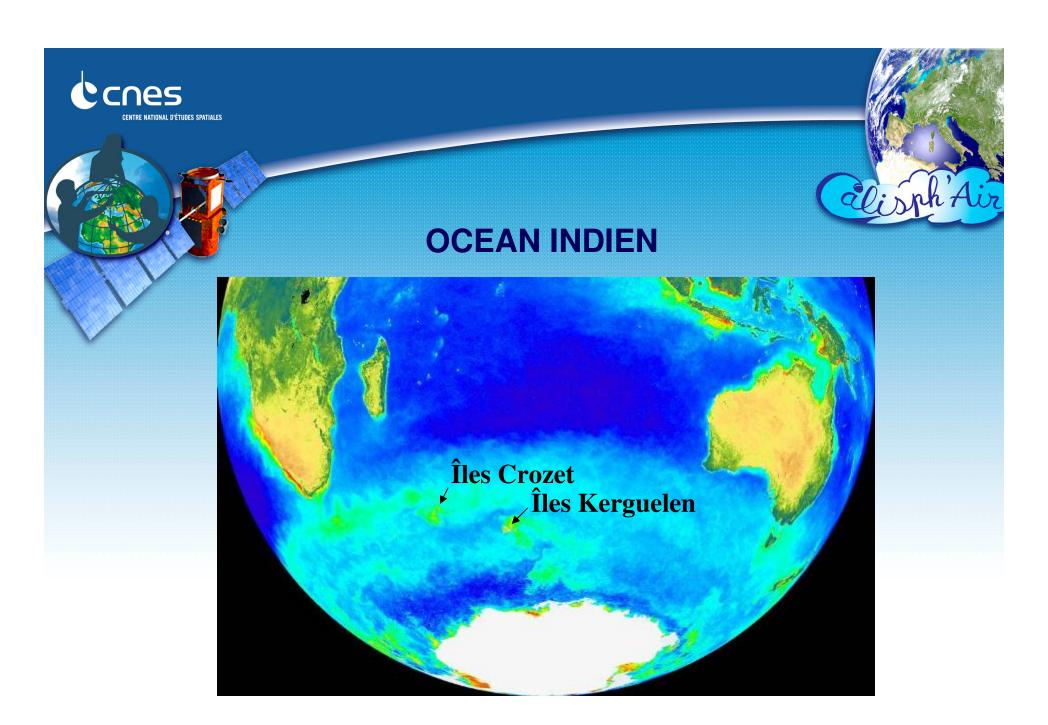




ArgNIMAUX

Polar animals, witnesses to climate change

- subantarctic
 - penguins
 - elephant seals
 - albatrosses
- arctic
 - Ivory gulls

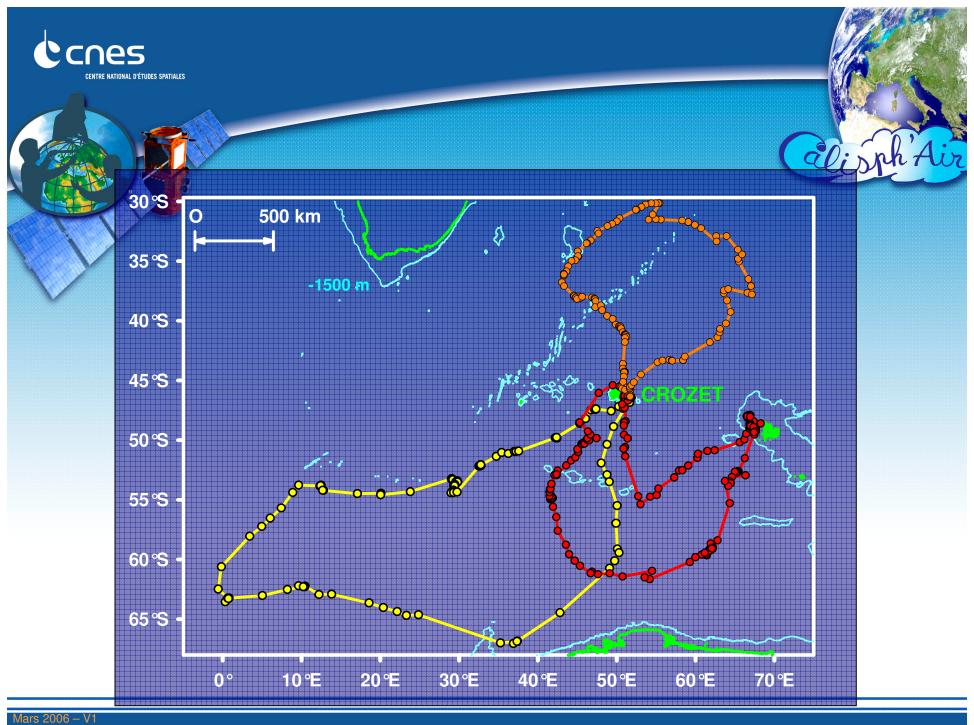




CENTRE NATIONAL D'ÉTUDES SPATIALES



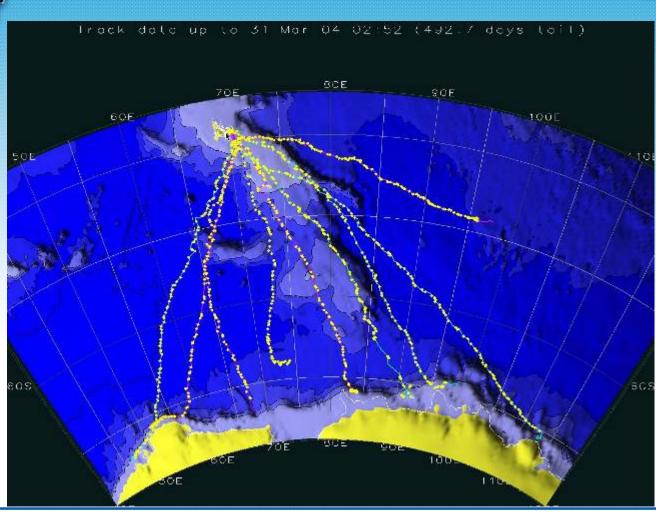


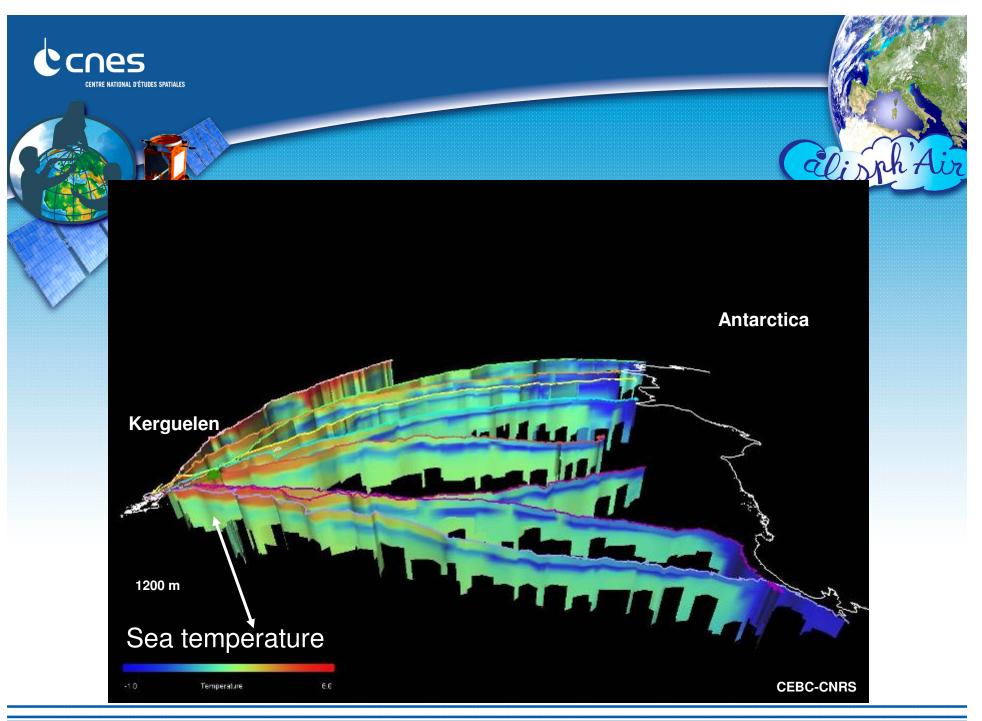




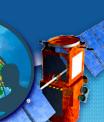






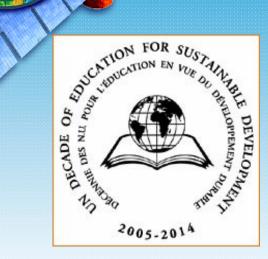






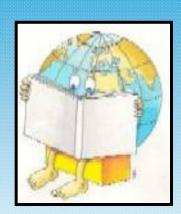
SUSTAINABLE DEVELOPMENT





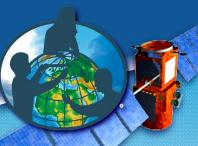
United Nations

Unesco



Sustainable Development meets the needs of today's population without harming the ability of future generations to meet their own needs.





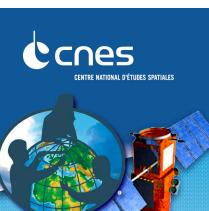
SUSTAINABLE DEVELOPMENT IN EUROPE

Think globally ... Act locally ...

- International
- ⇒ European
- ⇒ national
- communities
- companies
- ⇒ citizen
- ⇒ Schools

By the mobilization ...

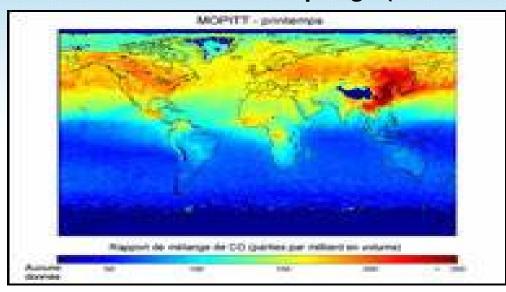
Different scales



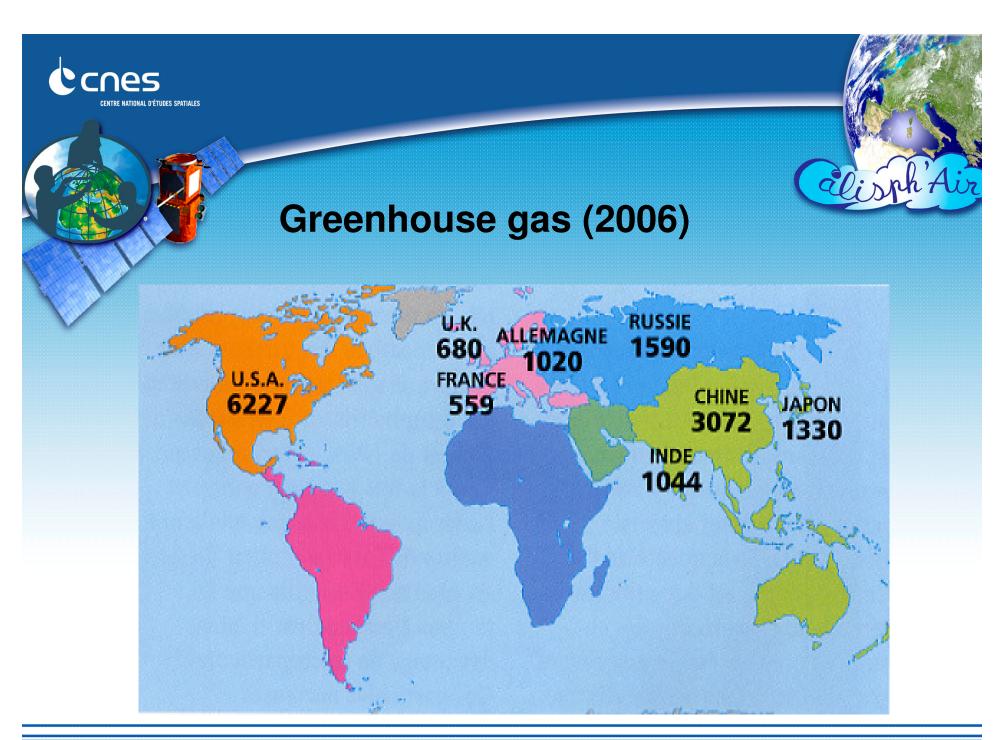


Satellite and anthropic pollution

satellite Map (March 2000 to February 2004) dioxide carbon concentration in Spring . (Illustration : MOPITT)



Satellites data or pictures help us to understand anthropic pollution impacts.





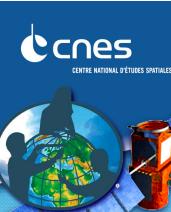


Human pollution (CO₂) and global warming





Pollution from Human activities 87%





Awareness pollution for young people

- By measures
- By Action









- go on with the promotion of satellite data
 - -cross correlation of ground and satellite data,
 - -use satellites as earth observatory...
- integrating to NGG (Seasons and Biomes..)
- Cooperation with GLOBE schools these projects



GLOBE France and the (tut)

Canadian and others schools working with A-train data

- -Try to build multi years plan with the collaboratives schools: field campaigns, opportunity of measurements
- Try to improve scientist involvement on the project.

